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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/998,365	11/29/2001	Walter H. Ohrbom	IN-5113	5536

26922 7590 09/30/2002

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EXAMINER
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ASINOVSKY, OLGA NMN

ART UNIT	PAPER NUMBER
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1711

DATE MAILED: 09/30/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/998,365

Applicant(s)

Ohrbom et al

Examiner

Olga Asinovsky

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (e). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on Nov 29, 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some\* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_ 6) ☐ Other:

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## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over December

U.S. Patent 6,376,616.

The present invention is a method of making functional urethanized acrylic graft polymer comprising producing an acrylic backbone polymer having at least one cyclic carbonate group, having a chemical structure specified in the present claim 1, and grafting at least one grafting material comprising at least one amine group onto a said acrylic backbone polymer such that a reaction occurs between the at least one amine group and cyclic carbonate functional group for producing a hydroxyl functional urethanized acrylic graft polymer.

December discloses a process for producing a compound having anionic functional groups grafted onto an acrylic backbone polymer through a linkage selected from the group consisting of urethane linkages, urea linkages, beta-hydroxy ester linkages, beta-hydroxy amine linkages, and mixture thereof, column 3, lines 66-67 and claim 1 at column 17. The acrylic backbone is formed

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by reaction of ethylenically unsaturated monomers including at least one monomer (i) having functionality that is used after polymerization to incorporate anionic groups, column 4, lines 3-7. The monomer (i) can be selected having the epoxy functionality, it will react with an amine to form a beta-hydroxy amine linkage, column 4, lines 38-41. The monomers having epoxy functionality such as glycidyl methacrylate, glycidyl acrylate and allyl glycidyl ether (column 4, lines 47-49) are readable in applicants' claimed monomer having a cyclic carbonate functional group. The monomer (i) having epoxy functionality is reacting with an amine to form a beta-hydroxy amine linkage.

The difference between the present claims and December's reference is the requirement in the present claims of a grafting material comprising at least one amine group wherein a said grafting material is selected from primary amines, secondary amines and mixtures of both primary and secondary amines. December discloses tertiary amines, column 7, line 5. However, in the alternative, the reaction can be produce by reacting a primary amine or secondary amine or diamine with a cyclic carbonate, column 10, lines 18-19. Therefore, it would have been obvious to one of ordinary skill in the art to use a primary amine or a secondary amine as a grafting material for the reacting with the selected cyclic carbonate functional groups of the acrylic backbone polymer because the degree of the grafting and the amine functionality are depending on the balance of the desired solubility (=hydrophilic portion) of the obtained final product.

There is no applicants' PTO Form 1449.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Olga Asinovsky whose telephone number is (703) 308-0041. The examiner can normally be reached on Monday to Friday from 9:00am to 5:30pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck, can be reached on (703) 308-2462. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-7718 and (703) 872-9311 after final.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

O.A.

O.A.

September 24, 2002

  
James J. Seidleck  
Supervisory Patent Examiner  
Technology Center 1700